



ATDE

ENTERED

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/085,476

DATE: 03/12/2002 TIME: 15:11:01

Input Set : A:\IT0002PCA.TXT

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4 <110> APPLICANT: De Francesco, Raffaele
              Tomei, Licia
              Behrens, Sven-Erik
      6
      8 <120> TITLE OF INVENTION: METHOD FOR REPRODUCING IN VITRO THE
              RNA-DEPENDENT RNA POLYMERASE AND TERMINAL NUCLEOTIDYL
     10
              TRANSFERASE ACTIVITIES ENCODED BY HEPATITIS C VIRUS (HCV)
     13 <130> FILE REFERENCE: IT0002PCA
C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/085,476
C--> 15 <141> CURRENT FILING DATE: 2002-02-27
     15 <150> PRIOR APPLICATION NUMBER: 08/952,981
     16 <151> PRIOR FILING DATE: 1998-03-23
     18 <150> PRIOR APPLICATION NUMBER: PCT/IT96/00106
     19 <151> PRIOR FILING DATE: 1996-05-24
     21 <150> PRIOR APPLICATION NUMBER: RM95A000343
     22 <151> PRIOR FILING DATE: 1995-05-25
     24 <160> NUMBER OF SEQ ID NOS: 14
     26 <170> SOFTWARE: FastSEO for Windows Version 4.0
     28 <210> SEQ ID NO: 1
     29 <211> LENGTH: 591
     30 <212> TYPE: PRT
     31 <213> ORGANISM: Hepatitis C virus
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                    20
     38 His His Asn Met Val Tyr Ala Thr Thr Ser Arg Ser Ala Gly Leu Arg
     40 Gln Lys Lys Val Thr Phe Asp Arg Leu Gln Val Leu Asp Asp His Tyr
                                55
     42 Arg Asp Val Leu Lys Glu Met Lys Ala Lys Ala Ser Thr Val Lys Ala
                            70
     44 Lys Leu Leu Ser Val Glu Glu Ala Cys Lys Leu Thr Pro Pro His Ser
                        85
     46 Ala Lys Ser Lys Phe Gly Tyr Gly Ala Lys Asp Val Arg Asn Leu Ser
                    100
                                        105
     47
     48 Ser Lys Ala Val Asn His Ile His Ser Val Trp Lys Asp Leu Leu Glu
                                                         125
                115
                                    120
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                                135
            130
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     54 Val Phe Pro Asp Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr
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Input Set : A:\IT0002PCA.TXT

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59	_	_	195	_	_	_		200	_,	_		•	205	•	G	Dh.
	Lys		Lys	Lys	Asn	Pro		GIĀ	Pne	ser	Tyr	220	Thr	Arg	Cys	Pne
61	Asp	210	Thr	Va 1	Thr	Glu	215 Agn	Δen	Tle	Δrσ	Va 1		Glu	Ser	Tle	Tvr
	225	261	1111	Val	1111	230	กรแ	nsp	110	nry	235	014	014	001		240
	Gln	Cvs	Cvs	Asp	Leu		Pro	Glu	Ala	Arg		Ala	Ile	Lys	Ser	
65		0,70	-1-		245					250				-	255	
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67			-	260					265					270		
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69			275					280					285		_	_
	Cys	_	Asn	Thr	Leu	Thr		Tyr	Leu	Lys	Ala		Ala	Ala	Cys	Arg
71	- 1	290	-	.	a 1	•	295	m b	1 /24	T	37 n 3	300	C1	7.00) an	Tou
	Ala	Ата	гаг	ьeu	GIII	310	Cys	THE	Mec	Leu	315	ASII	GIĀ	wsb	ASP	320
	305 Val	Val	т1Д	Cve	Glu		Δla	Glv	Thr	Gln		Asp	Ala	Ala	Ser	-
75	, ui	Val	110	Cys	325	501	1114	017		330	024	F			335	
	Arg	Val	Phe	Thr		Ala	Met	Thr	Arq		Ser	Ala	Pro	Pro	Gly	Asp
77				340					345	-				350	_	_
78	Pro	Pro	Gln	Pro	Glu	Tyr	Asp	Leu	Glu	Leu	Ile	Thr	Ser	Cys	Ser	Ser
79			355					360			·		365			
80	Asn		Ser	Val	Ala	His		Ala	Ser	Gly	Lys		Val	Tyr	Tyr	Leu
81		370	_	_			375	_				380		a1	m la an	21-
	Thr	Arg	Asp	Pro	Thr		Pro	Leu	Ата	Arg	395	Ата	Trp	GIU	Thr	400
	385 Arg	ui c	mh.∽	Dro	บอไ	390	Sar	Trn	T.011	Glv		Tle	Tle	Met	Tυr	
85	AIG	птэ	1111	PIU	405	NSII	Ser	пр	пец	410	non	110	110	1100	415	
	Pro	Thr	Leu	Trp		Arq	Met	Ile	Leu		Thr	His	Phe	Phe		Ile
87				420					425					430		
88	Leu	Leu	Ala	Gln	Glu	Gln	Leu	Glu	Lys	Ala	Leu	Asp	Cys	Gln	Ile	Tyr
89			435					440					445			
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91		450			_	_	455		_	_	•	460			5	01
	Arg	Leu	His	Gly	Leu		Ala	Phe	Ser	Leu		ser	Tyr	ser	Pro	480
	465 Glu	T1.	N an	7 ~~	Wa 1	470	C02	Cvc	Tou	λ ~ α	475	LOU	G1 v	Va 1	Dro	
95	GIU	TTE	ASII	AIG	485	нта	Ser	Cys	ьеи	490		пеп	GLY	Val	495	110
	Leu	Arσ	Val	Trp	_	His	Ara	Ala	Ara			Ara	Ala	Arq		Leu
97	Deu	**** 9		500			5		505			,		510		
	Ser	Gln	Gly	Gly	Arg	Ala	Ala	Thr	Cys	Gly	Lys	Tyr	Leu	Phe	Asn	Trp
99			515					520					525			
10	O Ala			s Th	r Ly	s Le			u Th	r Pro	o Il			a Ala	a Se	r Arg
10		530			-	_	53				_	54			. . .	1
			p Lei	ı Se	r Gl			e va	ı Ala	a GI			r Gl	A GT	y As	p Ile
Τ0	3 54)				55	U				55	J				560



Input Set : A:\IT0002PCA.TXT

								_	_		_	_,		_	_	-
	Tyr	His	Ser	Leu		Arg	Ala	Arg	Pro		Trp	Pne	met	Leu		Leu
105	_	_		a	565	~1	**- 1	a 1	-1 -	570	T	T 0	Dwa	3.00	575	
	Leu	Leu	Leu		val	GIY	vaı	GTĀ		Tyr	Leu	Leu	Pro		Arg	
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	<400 Met					λla	λla	Sor	Cue	Glv	G1 ₃₇	λla	Val	Dhe	Val	Glv
116	Met 1	ASP	AIG	GIU	5	AIG	ліа	561	Cys	10	OLY	niu	, u .	1 110	15	011
	Leu	Va l	T.Ou	T.011	_	T.011	Ser	Pro	Tvr		Lvs	Val	Phe	Leu		Ara
118	пеп	Val	Бец	20	1111	пси	DCI	110	25	-1-	275	,		30		9
	Leu	Tle	Ψrn		T.en	Gln	Tvr	Phe		Thr	Ara	Ala	Glu		asp	Leu
120	БСи	110	35		LCu	·	-1-	40			9		45			
	His	Va l		Ile	Pro	Pro	Leu		Ala	Arq	Gly	Gly	Arq	Asp	Ala	Ile
122		50					55			5	1	60	,	•		
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124					. 4	70					75			-		80
	Lys	Leu	Leu	Ile	Ala	Ile	Leu	Gly	Pro	Leu	Met	Val	Leu	Gln	Ala	Gly
126	4				85			_		90		·			95	
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128			_	100		-			105					110		
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	145					150					155					160
135	Ala	Val	Glu	Pro	Val	Val	Phe	Ser	Asp		Glu	Thr	Lys	Ile		Thr
136					165				_	170	_		_		175	
	Trp	Gly	Ala		Thr	Ala	Ala	Cys		Asp	Ile	IIe	Leu		Leu	Pro
138	_		_	180	_		_		185	_	_	~ 1	.	190	•	
	Val	Ser		Arg	Arg	GTA	Lys		He	Leu	Leu	GTÄ		Ата	Asp	ser
140	_	~ •	195	_			•	200	.		D	*1 -	205	31 0		Com
	Leu		GLY	Arg	GLY	Leu		Leu	ьeu	Ala	Pro		Thr	Ald	тут	ser
142		210	m 1	3	~1	T 0	215	C1	Crra	т1.	тіл	220	cor	LOU	Thr	Glv.
	Gln	GIn	Tnr	Arg	GIY	230	Leu	СТА	Cys	TTE	235	TIII	261	ьеu	TIII	240
144	225 Arg	N an	T ***	λαη	Cln		Glu	Gl v	Glu	Val		Va 1	Val	Ser	Thr	
		ASP	гур	MSII	245	Val	GIU	GLY	Giu	250	GIII	141	VUI	501	255	mu
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	Thr	Gln		Tvr	Thr	Asn	Va l		Gln	Asp	Leu	Val		Trp	Pro	Lys
152		290		-1-			295					300	1	L		- <u>-</u> -
	Pro		Glv	Ala	Arσ	Ser		Thr	Pro	Cvs	Thr		Gly	Ser	Ser	Asp
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Input Set : A:\IT0002PCA.TXT

				•												
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	λen		Val	Pro	Val	Glu		Met	Glu	Thr	Thr	Met	Ara	Ser	Pro	Val
	385	rnc	741	110	· u _	390		1100	014		395		5			400
		mh ~	3.00	Asn	C0~		Dro	Dro	λla	Val		Gln	Ser	Dhe	Gln	
	Pne	THE	ASP	ASII		ser	PIO	PIO	AIG	410	PIO	GIII	Ser	FIIC	415	VUI
166		•	_	•	405	_		01			T		m 1	T		Dwo
	Ala	His	Leu	His	АТА	Pro	Thr	GIY		GIY	гаг	ser	Thr		vaı	PIO
168				420					425	_		_		430		_
169	Ala	Ala	Tyr	Ala	Ala	Gln	Gly		Lys	Val	Leu	Val		Asn	Pro	ser
170			435					440					445			
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173	Ile	Asp	Pro	Asn	Ilė	Arq	Thr	Gly	Val	Arg	Thr	Ile	Thr	Thr	Gly	Ala
	465	_				470		_			475					480
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177	Sor	Glv	Glv	Ala		Asp	Tle	Tle	Tle		Asp	Glu	Cvs	His	Ser	Thr
178	261	GIY	GLY	500	- 7 -	nop	110		505	O _I D			0,70	510		
		C	mh	Thr	т1.	T 011	C1	т1.		mhr.	Val	LOU	λcn		λla	Glu
	Asp	ser		THE	TTE	ьeu	GIY	520	GIY	1111	Val	пец	525	GIII	лта	GIU
180			515		_				.		m b			D	D===	C1
	Thr		GIĀ	Ala	Arg	Leu		val	ьeu	Ата	Thr		THE	PIO	PIO	GTĀ
182		530	_	_		_	535	_				540		_	_	•
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192	-1-	610	011				615					620	• •	-		
102	3751		ת 1 ת	Thr	λαη	λΙэ		Mot	Thr	Glv	Tur		Glv	Δen	Phe	Asn
	625	vai	ΑΙα	1111	кэр	630	пец	Mec	1111	GIJ	635	1111		p		640
		**- 3	T1 -	3	0		m b	G	3701	mb~		mh.~	37 2 7	N C P	Dho	
	ser	val	тте	Asp		ASN	Thr	Cys	Val		GIII	THE	vai	ASP		Ser
196			_		645				_,	650	-1.		D	a 1-	655	
	Leu	Asp	Pro		Phe	Thr	IIe	GLu		Thr	Thr	val	Pro		Asp	Ala
198				660					665					670	_	
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Input Set : A:\IT0002PCA.TXT

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208		_		740					745					750		
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211	Gln	Ala	Gly	Asp	Asn	Phe	Pro	Tyr	Leu	Val	Ala	Tyr	Gln	Ala	Thr	Val
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	Cys	Leu	Ile	Arg	Leu	Lys	Pro	Thr	Leu		Gly	Pro	Thr	Pro		Leu
216					805					810					815	_
217	Tyr	Arg	Leu		Ala	Val	Gln	Asn		Val	Thr	Leu	Thr		Pro	Ile
218				820					825	_				830	-	
	Thr	Lys	_	Ile	Met	Ala	Cys		Ser	Ala	Asp	Leu		Val	Val	Thr
220			835	_				840	•	_			845		- 1 .	
	Ser		Trp	Val	Leu	Val	Gly	Gly	Val	Leu	Ala		Leu	Ala	Ата	Tyr
222		850	•			_	855			1	a 1 .	860	-1 -	~1 -	T	G
		Leu	Thr	Thr	GLY		Val	vaı	ııe	Val		Arg	TTE	TTE	Leu	
	865	_			- 1 -	870	D			~1. ,	875	T 011	M	C15	C1	880 Bho
	GIĀ	Arg	Pro	АТа		vaı	Pro	Asp	Arg	890	ьeu	Leu	тут	GTII	895	Pne
226		a1	Mah	01.	885	0	Ala	C02	uic		Dro	Фттх	Tla	Glu		Cl v
	ASP	GIU	мес	900	GIU	Çys	нта	ser	905	пеп	PIO	TYL	116	910	GIII	GLY
228	Mot	Cln	LOU		Glu	Gln	Phe	T.v.c		T.vc	Δla	T.@11	Glv		Leu	Gln
230	Mec	GIII	915		. Gru	GTII	riic	920	0111	נע		11-cu	925	200		
	Thr	Δla	-			Δla	Glu		Δla	Δla	Pro	Va l	_	Glu	Ser	Lvs
232	1111	930	1111		01		935					940				
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250			107					108			_		108			
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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/085,476

DATE: 03/12/2002

TIME: 15:11:02

Input Set : A:\IT0002PCA.TXT

Output Set: N:\CRF3\03122002\J085476.raw

L:15~M:270~C: Current Application Number differs, Replaced Current Application No L:15~M:271~C: Current Filing Date differs, Replaced Current Filing Date